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10/018,085	03/21/2002	Gunter Wermeister	029777-06	6103

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EXAMINER

WALSH, BRIAN D

ART UNIT PAPER NUMBER

3722

DATE MAILED: 08/01/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/018,085	Applicant(s) WERMEISTER ET AL.	
	Examiner Brian D. Walsh	Art Unit 3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-31 and 33-38 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 14 December 2001 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 27 is a duplicate of claim 25, both depend from claim 18. One of the claims must be withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 26 and 36 – 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 26, the element “the corners... at which the raised corner portion *are not disposed*” lacks proper antecedent basis.

The Examiner notes that Applicant set forth in claim 18 only that at least one of the upper and lower faces includes raised corner regions at two diametrically opposed corners thereof. Applicant did not set forth in claim 18 or 26 that two corners (top or bottom face) *do not* include raised corner portions. The Examiner relied upon the specification and drawings to anticipate the intended limitation. Claim 26 will be examined as best understood. (Emphasis by Examiner).

Regarding claim 36, it is unclear what is intended by the broad limitation “...the seats disposed in each edge are equidistantly spaced apart.” Since there are inserts on opposing faces of the disc and there are inserts spaced apart around the circumference of

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the periphery of the disc, it is unclear in which perspective Applicant is claiming the inserts are equally spaced. Claims 36 – 38 will be examined as best understood.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 18 – 25 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Hessman et al.

Regarding claim 18, Hessman et al. discloses a cutting insert (10) for a milling cutter comprising a generally cuboidal body having substantially parallel upper (11a) and lower (12a) faces, four side faces (13a – 13d) and cutting edges (19) formed at the transitions between at least one of the upper and lower faces and the side faces. At least one of the upper and lower faces includes a raised corner region (see figure 3) at two diametrically opposed corners, the raised corner regions extending to respective side faces to form cutting edges at the transitions therewith.

Regarding claim 19, Hessman et al. discloses each raised corner region includes a top face arranged substantially parallel to a remaining non-raised portion of the respective upper or lower face (see figures 2 and 3).

Regarding claims 20 – 22, Hessman et al. discloses the cutting edge (19) extends along the said intersection of the top and side faces. It is clear in figure 2 that this cutting edge continues along a non-raised portion, a transitional portion and the

substantially flat portion in the corner of the insert. This configuration continues symmetrically along the other side of the same corner.

Regarding claims 23 and 24, it is clear in figure 1 that the body of the insert (10) has a square shape when viewed in a direction perpendicular to the top and bottom faces.

Regarding claims 25 and 27, Hessman et al. discloses, as is clear in figure 1, that the insert is of mirror-image symmetry with respect to a diagonal line extending between the corners with the raised portions.

Regarding claim 28, Hessman et al. discloses the side faces define a rake face of the cutting bit (Col. 2, lines 50 – 53).

Regarding claim 29, Hessman et al. discloses the cutting insert (10) has parallel side faces and is reversible (see figures 2 and 2a).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 18, 25, 26 and 30 are rejected, as best understood, under 35 U.S.C. 102(e) as being anticipated by Byström et al.

Regarding claim 18, Byström et al. discloses a cutting insert (1') for milling (Col. 2, lines 40 – 44) having a *generally* cuboidal body having substantially parallel upper and lower faces (not numbered but clear in the drawings) and cutting edges formed between at transitions between at least one of the upper and lower faces and the side faces. In

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figure 7, it is clear that Byström et al. discloses raised corner regions at only one set of diametrically opposed corners. (Emphasis by Examiner).

Regarding claims 25 and 26, again in figure 7, it is clear that the raised corner regions are of mirror-image symmetrical configuration with respect to a diagonal line extending between both sets of corners on the upper face.

Regarding claim 30, it is clear in figure 7 that the side faces converge toward the lower face.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 31 and 33 – 38 are rejected, as best understood, under 35 U.S.C. 103(a) as being unpatentable over Hessman et al. in view of Erkfritz.

Hessman et al. discloses all of the elements as set forth in the above rejections and although Hessman et al. discloses the inserts set forth in the invention are to be used in a milling environment, Hessman et al. fails to explicitly set forth that the inserts are to be mounted on a disc milling cutter.

Regarding claim 31, Erkfritz discloses a disc milling cutter comprising a cylindrical disc (40) having a plurality of seats (80) formed therein. The seats are spaced apart circumferentially with respect to a center axis of the disc with the cutting inserts (46) mounted in the respective seats.

Regarding claim 33, Erkfritz discloses the disc includes a cylindrical peripheral surface (similar to the peripheral surface of the instant invention as shown in figure 7) including an end face at an end of the surface, at least some of the seats (80) disposed in an edge defined by the intersection of the peripheral surface and the end face.

Regarding claim 34, it is clear in figure 2 that Erkfritz discloses at least some of the seats are spaced equidistantly apart.

Regarding claim 35, Erkfritz further discloses some of the seats (80) are disposed in an edge defined by an intersection of the peripheral surface and a second face. This element is clear in figure 2 wherein the inserts (grouped as 48) are located on both sides of a cartridge, one in each end face of the disc.

Regarding claim 36, Erkfritz discloses the inserts disposed in each edge are equally spaced apart. The Examiner notes that the cartridges (75, 76 and 77) are disposed equidistantly from each other on the disc cutter and, as well, the cartridges that contain two inserts each all have the inserts seated equidistantly apart.

Regarding claim 37, Erkfritz discloses the cutting inserts are placed such that the cutting edges overlap when in a machining operation (Col. 4, lines 46 – 58, also see figures 9, 10 and 11).

Regarding claim 38, it is clear in figure 8 of Hessman et al. that the raised corner region engages the work piece on both the axially and radially outermost regions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the milling cutter inserts of Hessman et al. to include the disc cutter as taught by Erkfritz since Erkfritz teaches the use of the disc

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cutter with inserts in a plurality of cutting positions in order to achieve a higher rate of material removal (Col. 1, lines 22 – 25).

Allowable Subject Matter

7. Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 32 includes specific limitations regarding the raised corner portions of the cutting insert. Claim 32 includes a limitation of a third wall in the disc cutter oriented perpendicular to the radius and having an opening for receiving a respective raised corner of the cutting insert. The prior art did not disclose nor render obvious these limitations in combination with the limitations of the preceding claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okamura et al. (U.S. Pat. Application No. US2002/0098360A1), Seidel, Shirley et al., Sjöö et al. and Matsumoto (Japanese Patent Document JP 7060509) all disclose cutting inserts with corner portions similar to the instant invention.

Faxing of Responses to Office Actions

9. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302. This

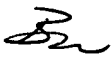
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practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the Examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the Examiner.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Walsh whose telephone number is (703) 605-0638. The examiner can normally be reached on Monday - Friday 7:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (703) 308-2159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.



BDW
July 25, 2003



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